the t.bone

IEM 200

UHF wireless system

thomann
MUSIC IS OUR PASSION

user manual

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1 General notes

This user manual contains important information on safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device, include the manual for the next owner.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

Symbols and signal words

This section provides an overview of the symbols and signal words used in this user manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – high-voltage.

Warning signs	Type of danger
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used for the wireless transmission of audio signals to earplugs. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety

DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.

DANGER!

Electric shock caused by short-circuit

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.

CAUTION!

Possible hearing impairment

The use of earphones at high volume over a longer period of time can cause permanent hearing damage.

Adjust the output volume of your audio device to a medium value and use the earphones no longer than about one hour a day.

NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

NOTICE!

Power supply

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

NOTICE!

Risk of fire due to incorrect polarity

Incorrectly inserted batteries may destroy the device or the batteries.

Ensure that proper polarity is observed when inserting batteries.

NOTICE!

Possible damage by leaking batteries

Leaking batteries can cause permanent damage to the device.

Take batteries out of the device if it is not going to be used for a longer period.

3 Features and scope of delivery

The UHF wireless system IEM 200 is suitable for use as in-ear monitoring system, especially for professional events, on rock stages and concert halls, theatres and musicals.

the t.bone IEM 200 606 MHz (item no. 278192)

Your UHF wireless system IEM 200 606 MHz consists of the following components:

- 9.5" stereo transmitter IEM 200 T
  - Very high sensitivity at very high signal-to-noise ratio
  - Inputs: 2 × XLR/1/4" phone combo socket
  - Headphones outlets (1/4" phone and 1/8" mini phone sockets) with volume control
  - Mounting option for one transmitter in a 19" rack (1 RU)
  - Operating voltage supply: AC 100 – 240 V ~ , 50/60 Hz
- Bodypack receiver IEM 200 R (also available separately; item no. 278194)
  - Earplug outlet (1/8" mini phone socket) with volume control
  - Volume and pan control
  - Operating voltage supply: 2 AA cells (LR6, 1.5 V)
- Earplugs EP 4

16 systems can be operated simultaneously. The system operates within a frequency range of 610,250 MHz to 629,750 MHz, divided into four frequency groups.

Included accessories: earpieces in various sizes, batteries and mounting material for rack mounting

the t.bone IEM 200 710 MHz (item no. 278283)

Your UHF wireless system IEM 200 710 MHz consists of the following components:

- 9.5" stereo transmitter IEM 200 T
  - Very high sensitivity at very high signal-to-noise ratio
  - Inputs: 2 × XLR/1/4" phone combo socket
  - Very high sensitivity at very high signal-to-noise ratio
  - Mounting option for one transmitter in a 19" rack (1 RU)
  - Operating voltage supply: AC 100 – 240 V ~ , 50/60 Hz
- Bodypack receiver IEM 200 R (also available separately; item no. 278287)
  - Headphones outlets (1/4" phone and 1/8" mini phone sockets) with volume control
  - Volume and pan control
  - Operating voltage supply: 2 AA cells (LR6, 1.5 V)
- Earplugs EP 4

16 systems can be operated simultaneously. The system operates within a frequency range of 714,250 MHz to 733,625 MHz, divided into four frequency groups.

Included accessories: earpieces in various sizes, batteries and mounting material for rack mounting

the t.bone IEM 200 740 MHz (item no. 278284)

Your UHF wireless system IEM 200 740 MHz consists of the following components:

- 9.5" stereo transmitter IEM 200 T
  - Very high sensitivity at very high signal-to-noise ratio
  - Inputs: 2 × XLR/1/4" phone combo socket
  - Very high sensitivity at very high signal-to-noise ratio
  - Mounting option for one transmitter in a 19" rack (1 RU)
  - Operating voltage supply: AC 100 – 240 V ~ , 50/60 Hz
- Bodypack receiver IEM 200 R (also available separately; item no. 278289)
  - Headphones outlets (1/4" phone and 1/8" mini phone sockets) with volume control
  - Volume and pan control
  - Operating voltage supply: 2 AA cells (LR6, 1.5 V)
- Earplugs EP 4

16 systems can be operated simultaneously. The system operates within a frequency range of 744,250 MHz to 763,625 MHz, divided into four frequency groups.

Included accessories: earpieces in various sizes, batteries and mounting material for rack mounting

the t.bone IEM 200 820 MHz (item no. 278285)

Your UHF wireless system IEM 200 820 MHz consists of the following components:

- 9.5" stereo transmitter IEM 200 T
  - Very high sensitivity at very high signal-to-noise ratio
  - Inputs: 2 × XLR/1/4" phone combo socket
  - Very high sensitivity at very high signal-to-noise ratio
  - Mounting option for one transmitter in a 19" rack (1 RU)
  - Operating voltage supply: AC 100 – 240 V ~ , 50/60 Hz
- Bodypack receiver IEM 200 R (also available separately; item no. 278290)
  - Headphones outlets (1/4" phone and 1/8" mini phone sockets) with volume control
  - Volume and pan control
  - Operating voltage supply: 2 AA cells (LR6, 1.5 V)
- Earplugs EP 4

16 systems can be operated simultaneously. The system operates within a frequency range of 824,250 MHz to 843,750 MHz, divided into four frequency groups.

Included accessories: earpieces in various sizes, batteries and mounting material for rack mounting

4 Installation and starting up

4.1 General information

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

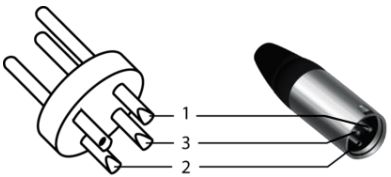
Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

Notes on wireless transmission

- This device utilizes frequencies that are not harmonized within the European Union (EU) and therefore may only be used in certain EU member states. In all European countries, the frequencies used for the transmission of audio signals are strictly regulated. Before you start, make sure the frequencies are allowed in the respective country and check whether the operation must be reported to the appropriate authority.
- Make sure that transmitter and receiver are both tuned to the same channel.
- Never set multiple transmitters to the same channel.
- Make sure that there are no metal objects between the transmitter and receiver.
- Avoid interference from other radio or in-ear systems.

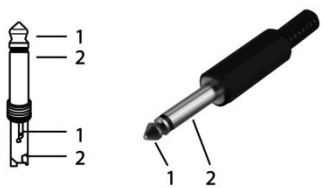
4.2 Transmitter

XLR connections for signal input on the transmitter



XLR/1/4" combo sockets are used for the signal inputs on the transmitter. Drawing and table indicate the XLR pin assignment (balanced wiring) as well as the pin assignment of a suitable 1/4" phone plug.

1	Ground, shielding
2	Positive signal (+)
3	Negative signal (–)



1	Signal
2	Ground, shielding

Phone socket for headphones outlet

Drawing and table indicate the pin assignment of a 1/8" (top) and 1/4" (bottom) phone plug to be used.

1	Signal (left)
2	Signal (right)
3	Ground, shielding

Rack mounting

The unit has been designed for rack mounting in a standard 19-inch rack; it occupies one rack unit.

Mounting the antenna

Attach the included antenna to the back of the transmitter. To improve the transmission quality and for adaptation to the specific spatial conditions, the antenna can be rotated and swivelled.

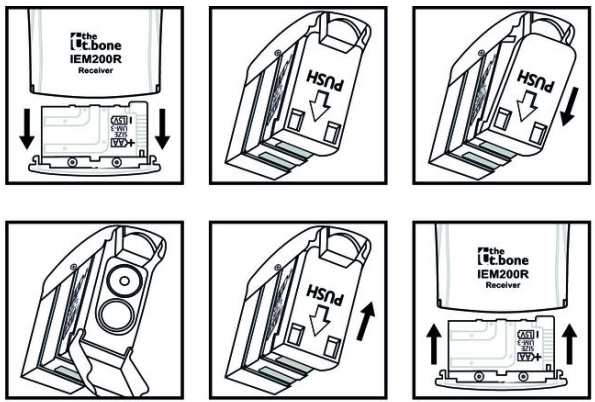
Audio connection and starting up

Connect the audio inputs of the transmitter to suitable outlets of your mixing console or amplifier. Set the volume control (6) to a mid position first.

To achieve best sound quality, a fine adjustment of this control may be required. If the input level is too high, enable the level attenuation function (☞ *'Enabling attenuation' on page 41*).

4.3 Transmitter

Inserting batteries into the receiver



Make sure that the main switch / volume control (17) of the receiver is in 'OFF' position.

Simultaneously press on both snap-in locks of the battery compartment at the side and pull it completely out of the receiver. Open the battery compartment lid by sliding the lid in arrow direction and then folding it up. Insert the batteries respecting the correct polarity. Close the battery compartment, the lid must snap-in firmly.

Rotate the battery compartment into the correct position to receiver; the side of the battery compartment on which two conductor paths can be seen must point to the top side of the receiver. Slide the battery compartment back into the receiver until it clicks into position.

Phone socket for earplugs

Drawing and table indicate the pin assignment of a 1/8" TRS mini phone plug for stereo use.

1	Signal (left)
2	Signal (right)
3	Ground, shielding

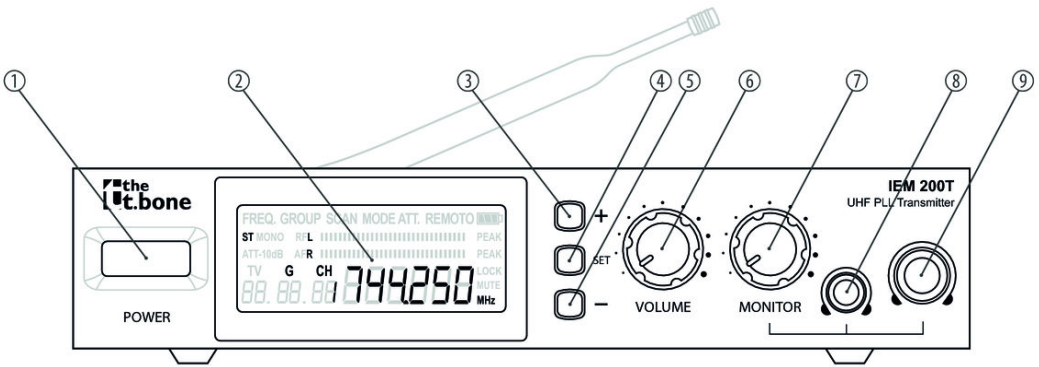
4.4 Starting up the system

- Make sure that both transmitter and receiver are switched off. The transmitter display is dark; the main switch / volume control (17) is in 'OFF' position.
- Attach the receiver with the clip to your belt or guitar strap.
- Carefully insert the earplugs into the ear canal, observing the markings 'L' and 'R' for left and right sides.
- Turn the transmitter on by pressing the main switch (1), turn the receiver on by turning the main switch / volume control (17). Then test the transmission. Make sure that both transmitter and receiver are set to the same frequency group and the same channel. If necessary, adjust the volume on transmitter and receiver as well as the mixer or amp levels.

5 Components and functions

5.1 Transmitter

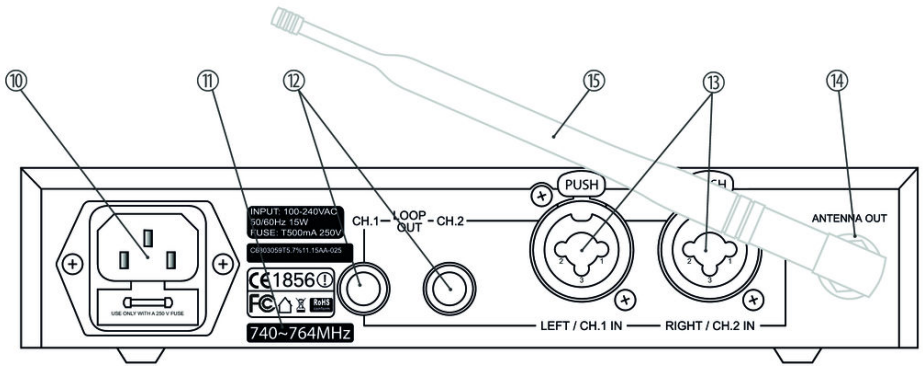
Front panel of the transmitter



1	**POWER** Main switch to turn the device on or off. For turning on, keep this button pressed for one second.
2	Display.
3, 5	*[+] / [–]* Buttons for increasing / decreasing the currently indicated value.
4	*[SET]* Enter button for menu navigation.
6	**VOLUME** Volume control.
7	**MONITOR** Headphones volume control.

8	**PHONES** 1/8" mini phone socket (stereo) for headphones connection.
9	**PHONES** 1/4" phone socket (stereo) for headphones connection.

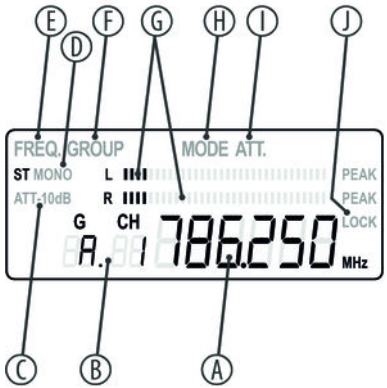
Rear panel of the transmitter



10	IEC chassis connector for the mains cable with fuse holder. Next to it, the proper operating voltage is indicated.
11	Indication of the frequency range, in which the unit operates. The specification here must match the specification on the rear side of the receiver.

12	**LOOP OUT CH1, CH2** 1/4" phone socket (mono). Use these outputs to feed the input signals to further wireless systems or other audio devices.
13	**LEFT CH.1 IN / RIGHT CH.2 IN** XLR / 1/4" combo sockets (left and right channel) for direct connection to a mixing console or another audio device that is used as signal source.
14	**ANTENNA OUT** BNC mounting socket for the supplied UHF antenna. Make sure that the frequency indicated on the antenna matches the frequency range indicated on the transmitter.
15	UHF antenna.

Display of the transmitter

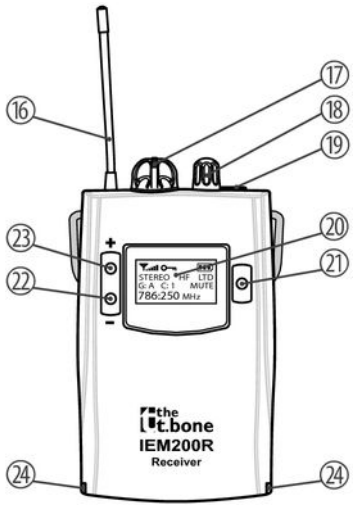


A	Indicates the frequency that is assigned to the set combination of frequency group and channel.
B	**G** / **CH** Indicates the selected frequency group and the set channel.
C	**ATT-10dB** Indicates that the attenuation is turned on.
D	**ST** / **MONO** Indicates the selected operating mode (stereo or mono).
E	**FREQ.** Flashing while the frequency is set.
F	**GROUP** Flashing while the frequency group is set.
G	Level indicator for left and right channel.

H	**MODE** Flashing while the operating mode is set.
I	**ATT** Flashing while the attenuation is set.
J	**LOCK** Indicates that the unit is locked to prevent unintentional operation.

5.2 Receiver

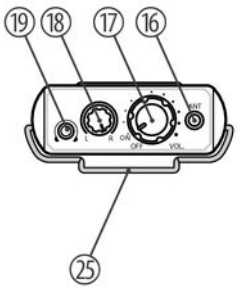
Front panel of the receiver



16	Flexible antenna.
17	**OFF/ON/VOL** Main switch and volume control. Turn this knob clockwise past the point of resistance to turn on the receiver. Turn it further to increase the volume. Turn this knob counter-clockwise to reduce the volume. Turn it further past the point of resistance to turn off the receiver.
18	**L/R** Panorama control.
19	1/8" mini phone socket (stereo) for the earplugs.
20	Display.
21	*[SET]* Enter button for menu navigation.

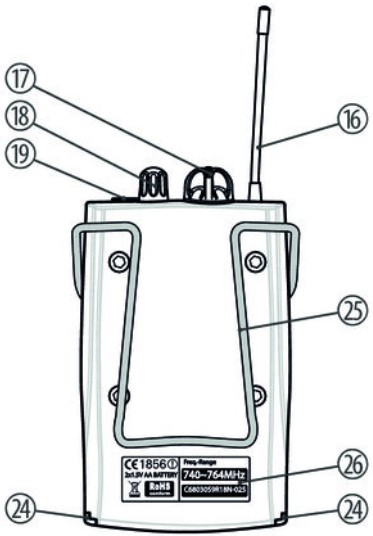
22, 23	+ / – Buttons to increase or decrease the currently shown value.
24	Fasteners of the battery compartment for two AA cells (LR6, 1.5 V) or comparable rechargeable batteries.

Top panel of the receiver



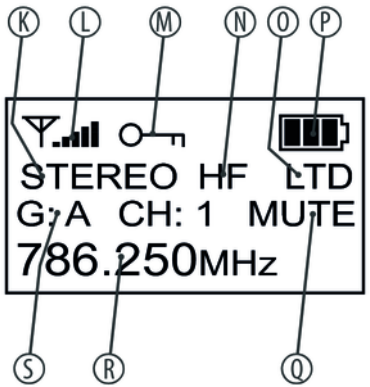
16	Flexible antenna.
17	**OFF/ON/VOL** Main switch and volume control. Turn this knob clockwise past the point of resistance to turn the receiver on. Turn it further to increase the volume. Turn this knob counter-clockwise to reduce the volume. Turn it further past the point of resistance to turn off the receiver.
18	**L/R** Panorama control.
19	1/8" mini phone socket (stereo) for the earplugs.
25	Clip to attach the transmitter to the guitar strap or your body, e.g. to the belt.

Rear panel of the receiver



16	Flexible antenna.
17	**OFF/ON/VOL** Main switch and volume control. Turn this knob clockwise past the point of resistance to turn the receiver on. Turn it further to increase the volume. Turn this knob counter-clockwise to reduce the volume. Turn it further past the point of resistance to turn off the receiver.
18	**L/R** Panorama control.
19	1/8" mini phone socket (stereo) for the earplugs.
24	Fasteners of the battery compartment for two AA cells (LR6, 1.5 V) or comparable rechargeable batteries.
25	Clip to attach the transmitter to the guitar strap or your body, e.g. to the belt.
26	Indication of the frequency range in which the device operates. The specification here must match the specification printed on the back of the transmitter.

Display of the receiver



K	**STEREO** Indicates the selected operating mode (stereo or mono).
L	Radio signal strength indicator (one to five bars).
M	Indicates that the unit is locked to prevent unintentional operation.
N	**HF** Indicates the activated high frequency boost function.
O	**LTD** Indicates that the overload protection (dynamic limiter) is turned on, preventing clipping and volume peaks.
P	Battery level indicator. Replace the batteries when only one bar remains displayed.
Q	**MUTE** Indicates that no signal is received, e.g. due to a turned off transmitter.

R	Indicates the frequency that is assigned to the set combination of frequency group and channel.
S	**G:** / **CH:** Indicates the selected frequency group and the set channel.

6 Operating

6.1 Setting up the transmitter

Selecting frequency group and channel

Keep *[SET]* pressed for some seconds until the field *'FREQ'* is flashing in the top row of the display. Press *[SET]* again until the field *'GROUP'* is flashing in the top row of the display and the field *'G'* is flashing in the bottom row of the display. Use the *[+]* / *[–]* buttons to increase or decrease the displayed value. When the desired value is shown, press *[SET]* to confirm the setting and to proceed to the channel setting.

The field *'GROUP'* is flashing in the top row of the display and the field *'CH'* is flashing in the bottom row.

Use the *[+]* or *[–]* button to increase or decrease the displayed value. When the desired value is shown, press *[SET]* to confirm the setting and to quit the menu.

In the bottom right area, the display shows the used transmission frequency in MHz that is assigned to the set combination of frequency group and channel (↬ *Chapter 8.3 'Frequency charts' on page 52*).

Transmitter and receiver must be set to the same combination of frequency group and channel. If you use multiple wireless systems from this device family, for best results you should assign all systems to the same frequency group, but give each system a different channel.

Setting the frequency directly

As an alternative to selecting the frequency group and channel, you can also adjust the transmission frequency directly.

Keep *[SET]* pressed for some seconds until the field *'FREQ'* is flashing in the top row of the display. Use the *[+]* / *[–]* buttons to increase or decrease the displayed value. When the desired value is shown, press *[SET]* to confirm the setting and to quit the menu.

In the bottom right area, the display shows the adjusted transmission frequency in MHz.

Selecting the operating mode

Keep *[SET]* pressed for some seconds until the field *'FREQ'* is flashing in the top row of the display. Press *[SET]* again until the field *'MODE'* is flashing in the top row of the display.

Use the *[+]* / *[–]* buttons to toggle between mono and stereo operation. When the desired mode is shown, press *[SET]* to confirm the setting and to quit the menu.

Enabling attenuation

Keep *[SET]* pressed for some seconds until the field *'FREQ'* is flashing in the top row of the display. Press *[SET]* again until the field *'ATT.'* is flashing in the top row of the display.

Use the *[+]* / *[–]* buttons to turn a 10 dB attenuation on or off. When the desired mode is shown, press *[SET]* to confirm the setting and to quit the menu.

Locking against changes

Keep *[SET]* pressed for some seconds until the field *'FREQ'* is flashing in the top row of the display. Press *[SET]* again until the field *'LOCK'* is flashing in the right column of the display.

Use the *[+]* / *[–]* buttons to toggle between locked (display shows *'Loc ON'*) and unlocked (display shows *'Loc OFF'*) operation. In locked mode, the system settings can be viewed, but not changed. The lock also prevents the unintentional switching on of the unit. When the desired mode is shown, press *[SET]* to confirm the setting and to quit the menu.

6.2 Setting up the receiver

Opening the menu

If the receiver is turned on, keep *[SET]* pressed for some seconds until the menu appears in the display. Use the *[+]* / *[–]* buttons to select a menu item.

Selecting frequency group and channel

Select the menu item *'2. Group/Channel'*. Press *[SET]*. *'Setup Group'* appears in the first row of the display.

Use the *[+]* / *[–]* buttons to increase or decrease the displayed value. When the desired value is shown, press *[SET]* to confirm the setting and to proceed to the channel setting. *'Setup Chan'* appears in the first row of the display.

Use the *[+]* / *[–]* buttons to increase or decrease the displayed value. When the desired value is shown, press *[SET]*. The display shows the confirmation prompt *'Setup is Changed. Do you Want to Save?'*. Press *'+'* to apply the changed settings and quit this menu item, or press *'–'* to leave this menu item without saving the changes.

In the bottom row, the display shows the used transmission frequency in MHz that is assigned to the set combination of frequency group and channel.

Transmitter and receiver must be set to the same combination of frequency group and channel. If you use multiple wireless systems from this device family, for best results you should assign all systems to the same frequency group, but give each system a different channel.

Setting the frequency directly

As an alternative to selecting the frequency group and channel, you can also adjust the transmission frequency directly.

Select the menu item *'1. Frequency'*. Press *[SET]*. *'Frequency'* appears in the top row of the display.

Use the *[+]* / *[–]* buttons to increase or decrease the displayed value. When the desired value is shown, press *[SET]*. The display shows the confirmation prompt *'Setup is Changed. Do you Want to Save?'*. Press *'+'* to apply the changed settings and quit this menu item, or press *'–'* to leave this menu item without saving the changes.

In the bottom row, the display shows the used transmission frequency in MHz.

Selecting the operating mode

Select the menu item *'3. Stereo/Mono'*. Press *[SET]*. *'Stereo/Mono'* appears in the top row of the display.

Use the *[+]* / *[–]* buttons to toggle between mono and stereo operation. When the desired mode is shown, press *[SET]* to confirm the setting and to leave this menu item.

Enabling treble boost

Select the menu item *'4. Hi Freq. Boost'*. Press *[SET]*. *'Hi Freq. Boost'* appears in the top row of the display.

Use the *[+]* / *[–]* buttons to turn the treble boost (increasing the high frequencies) on or off (display shows *'ON'* or *'OFF'*). If this function is turned on the high frequencies of the transmitted signal are boosted. The field *'HF'* appears in the display. When the function is disabled there is no boost. When the desired mode is shown, press *[SET]* to confirm the setting and to leave this menu item.

Enabling overload protection

Select the menu item *'5. Limiter'*. Press *[SET]*. *'Limiter'* appears in the top row of the display.

Use the *[+]* / *[–]* buttons to turn the overload protection (dynamic limiter) on or off (display shows *'ON'* or *'OFF'*). When the desired mode is shown, press *[SET]* to confirm the setting and to leave this menu item.

Locking the settings

Select the menu item *'6. Key lock'*. Press *[SET]*. *'Key lock'* appears in the top row of the display.

Use the *[+]* / *[–]* buttons to toggle between locked (display shows *'ON'*) and unlocked (display shows *'OFF'*) operation. In locked mode, the system settings can be viewed, but not changed. The display shows a key symbol then. When the desired mode is shown, press *[SET]* to confirm the setting and to leave this menu item.

Setting the display contrast

Select the menu item *'7. Contrast'*. Press *[SET]*. The display shows a symbolic slider.

Use the *[+]* / *[–]* buttons to change the contrast in a range of –3 and +3. When the display has the desired contrast, press *[SET]* to confirm the setting and to leave this menu item.

Setting the illumination duration

Select the menu item *'8. Light time'*. Press *[SET]*. The display shows a symbolic slider.

Use the *[+]* / *[–]* buttons to choose from the following settings:

- Permanently off (setting *'OFF'*)
- Permanently on (setting *'ON'*)
- Turning off after preset time (setting *'1 sec'* to *'30 sec'*).

When the display shows the desired value, press *[SET]* to confirm the setting and to leave this menu item. Keep in mind, that the background illumination duration affects the battery lifetime.

Closing the menu

Select the menu item *'9. Exit'* and press *[SET]*.

7 Troubleshooting

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
No sound	1. Check the power supply of the transmitter and receiver.
	2. Make sure that both transmitter and receiver operate in the same frequency range and that the transmitting antenna is designed for this frequency range. The frequency range is stated on the devices.
	3. Are both transmitter and receiver set to the same frequency group and the same channel?
	4. Check the connection between the transmitter and the connected audio device (amp, mixer). Is the connected audio device switched on and does the output signal level of the audio device match the input sensitivity of the transmitter?
	5. Try to improve the transmission by moving the receiver closer to the transmitter.
Transmission interference	1. Make sure that no metal objects near the transmitter or receiver obstruct the transmission.
	2. Modify the orientation of the antennas.

Symptom	Remedy
	2. If you use more than one wireless system at the same time, check the used frequency groups and channels.
	3. Interference can also be caused by televisions, radios or mobile phones.
The sound is distorted	1. Change the 'VOLUME' setting on the transmitter.
	2. Turn the overload protection on.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at *www.thomann.de*.

8 Technical specifications

8.1 Transmitter

Input	2 × XLR / 1/4" combo sockets (balanced)
Headphones outlet	1/4" phone and 1/8" mini phone sockets (stereo)
Modulation type	Frequency modulation (FM)
Transmission level	10 dBm
Transmission power	10 mW
Input impedance	20 kΩ
Normal audio input level	–4 dBV (0 dB)
	6 dBV (–10 dB)
Maximum audio input level	19 dBV (0 dB)
	29 dBV (–10 dB)

Gain range	24 dB
NF frequency response	50 Hz…15 kHz (±3 dB)
THD	< 1 % @ 1 kHz
Dynamic range	> 80 dB (A-weighted)
Operating supply voltage	AC 100 – 240 V ~ , 50/60 Hz
Dimensions (W × D × H, without antenna)	212 mm × 220 mm × 44 mm (1 RU)
Weight	1450 g

8.2 Receiver

Modulation type	Frequency modulation (FM)
Image frequency rejection	> 60 dB
Sensitivity	–102 dBm @ 12 dB SINAD, typical

Audio output level	100 mW
Operating supply voltage	2 × AA cells (LR6, 1.5 V)
Dimensions (W × D × H, without antenna)	75 mm × 130 mm × 25 mm
Weight (without batteries)	200 g

8.3 Frequency charts

the t.bone IEM-200 606 MHz – 630 MHz (item no. 278192)							
Frequency group A							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
610.250 MHz	611.500 MHz	612.500 MHz	613.125 MHz	614.250 MHz	615.125 MHz	616.500 MHz	619.500 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
620.250 MHz	621.875 MHz	623.000 MHz	624.500 MHz	625.000 MHz	626.750 MHz	627.750 MHz	629.250 MHz
Frequency group B							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
606.750 MHz	607.375 MHz	609.125 MHz	610.000 MHz	611.250 MHz	612.250 MHz	612.875 MHz	614.000 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
614.875 MHz	616.250 MHz	619.250 MHz	620.000 MHz	621.625 MHz	622.750 MHz	624.250 MHz	629.750 MHz

the t.bone IEM-200 606 MHz – 630 MHz (item no. 278192)							
Frequency group C							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
607.125 MHz	607.750 MHz	608.625 MHz	609.750 MHz	610.500 MHz	612.125 MHz	612.875 MHz	614.250 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
615.000 MHz	616.875 MHz	620.500 MHz	621.875 MHz	622.625 MHz	623.750 MHz	624.375 MHz	629.750 MHz
Frequency group D							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
606.625 MHz	607.125 MHz	607.875 MHz	609.625 MHz	611.875 MHz	613.125 MHz	613.875 MHz	615.125 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
616.875 MHz	617.375 MHz	618.875 MHz	619.375 MHz	620.125 MHz	622.250 MHz	623.625 MHz	629.625 MHz

the t.bone IEM-200 710 MHz – 734 MHz (item no. 278283)							
Frequency group A							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
714.250 MHz	715.500 MHz	716.500 MHz	717.125 MHz	718.250 MHz	719.125 MHz	720.500 MHz	723.500 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
724.250 MHz	725.875 MHz	727.000 MHz	728.500 MHz	729.000 MHz	730.750 MHz	731.750 MHz	733.250 MHz
Frequency group B							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
710.750 MHz	711.375 MHz	713.125 MHz	714.000 MHz	715.250 MHz	716.250 MHz	716.875 MHz	718.000 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
718.875 MHz	720.250 MHz	723.250 MHz	724.000 MHz	725.625 MHz	726.750 MHz	728.250 MHz	733.750 MHz

the t.bone IEM-200 710 MHz – 734 MHz (item no. 278283)							
Frequency group C							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
711.125 MHz	711.750 MHz	712.625 MHz	713.750 MHz	714.500 MHz	716.125 MHz	716.875 MHz	718.250 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
719.000 MHz	720.875 MHz	724.500 MHz	725.875 MHz	726.625 MHz	727.750 MHz	728.375 MHz	733.750 MHz
Frequency group D							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
710.625 MHz	711.125 MHz	711.875 MHz	713.625 MHz	715.875 MHz	717.125 MHz	717.875 MHz	719.125 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
720.875 MHz	721.375 MHz	722.875 MHz	723.375 MHz	724.125 MHz	726.250 MHz	727.625 MHz	733.625 MHz

the t.bone IEM-200 740 MHz – 764 MHz (item no. 278284)							
Frequency group A							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
744.250 MHz	745.500 MHz	746.500 MHz	747.125 MHz	748.250 MHz	749.125 MHz	750.500 MHz	753.500 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
754.250 MHz	755.875 MHz	757.000 MHz	758.500 MHz	759.000 MHz	760.750 MHz	761.750 MHz	763.250 MHz
Frequency group B							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
740.750 MHz	741.375 MHz	743.125 MHz	744.000 MHz	745.250 MHz	746.250 MHz	746.875 MHz	748.000 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
748.875 MHz	750.250 MHz	753.250 MHz	754.000 MHz	755.625 MHz	756.750 MHz	758.250 MHz	763.750 MHz

the t.bone IEM-200 740 MHz – 764 MHz (item no. 278284)							
Frequency group C							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
741.125 MHz	741.750 MHz	742.625 MHz	743.750 MHz	744.500 MHz	746.125 MHz	746.875 MHz	748.250 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
749.000 MHz	750.875 MHz	754.500 MHz	755.875 MHz	756.625 MHz	757.750 MHz	758.375 MHz	763.750 MHz
Frequency group D							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
740.625 MHz	741.125 MHz	741.875 MHz	743.625 MHz	745.875 MHz	747.125 MHz	747.875 MHz	749.125 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
750.875 MHz	751.375 MHz	752.875 MHz	753.375 MHz	754.125 MHz	756.250 MHz	757.625 MHz	763.625 MHz

the t.bone IEM-200 820 MHz – 844 MHz (item no. 278285)							
Frequency group A							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
824.250 MHz	825.500 MHz	826.500 MHz	827.125 MHz	828.250 MHz	829.125 MHz	830.500 MHz	833.500 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
834.250 MHz	835.875 MHz	837.000 MHz	838.500 MHz	839.000 MHz	840.750 MHz	841.750 MHz	843.250 MHz
Frequency group B							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
820.750 MHz	821.375 MHz	823.125 MHz	824.000 MHz	825.250 MHz	826.250 MHz	826.875 MHz	828.000 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
828.875 MHz	830.250 MHz	833.250 MHz	834.000 MHz	835.625 MHz	836.750 MHz	838.250 MHz	843.750 MHz

the t.bone IEM-200 820 MHz – 844 MHz (item no. 278285)							
Frequency group C							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
821.125 MHz	821.750 MHz	822.625 MHz	823.750 MHz	824.500 MHz	826.125 MHz	826.875 MHz	828.250 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
829.000 MHz	830.875 MHz	834.500 MHz	835.875 MHz	836.625 MHz	837.750 MHz	838.375 MHz	843.750 MHz
Frequency group D							
Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
820.625 MHz	821.125 MHz	821.875 MHz	823.625 MHz	825.875 MHz	827.125 MHz	827.875 MHz	829.125 MHz
Channel 9	Channel 10	Channel 11	Channel 12	Channel 13	Channel 14	Channel 15	Channel 16
830.875 MHz	831.375 MHz	832.875 MHz	833.375 MHz	834.125 MHz	836.250 MHz	837.625 MHz	843.625 MHz

9 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

Disposal of batteries

Batteries must not be disposed of as domestic waste or thrown into fire. Dispose of the batteries according to national or local regulations regarding hazardous waste. To protect the environment, dispose of empty batteries at your retail store or at appropriate collection sites.

Disposal of your old device

This device is subject to the European directive 2012/19/EU. Do not dispose the device with your normal household waste.

Dispose this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.